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ANSI/ASA S12.60-2010/Part 1 American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools

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AMERICAN NATIONAL STANDARD

Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools

ANSI/ASA S12.60-2010/Part 1

Accredited Standards Committee S12, Noise

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AMERICAN NATIONAL STANDARD

**Acoustical Performance Criteria, Design
Requirements, and Guidelines for Schools,
Part 1: Permanent Schools**

Secretariat:

Acoustical Society of America

Approved April 28, 2010 by:

American National Standards Institute, Inc.

Abstract

This document is Part 1 of the ANSI/ASA S12.60 series and is applicable to classrooms and other learning spaces in permanent schools. Part 2 of the ANSI/ASA S12.60 series is applicable to relocatable classrooms and relocatable modular core learning spaces. This standard includes acoustical performance criteria, and design requirements for classrooms and other learning spaces. Annex A provides procedures for optional testing to determine conformance with the source background noise requirements and the noise isolation requirements of this standard. Annex B provides commentary information on various paragraphs of this standard. Annex C provides guidelines for controlling reverberation in classrooms.

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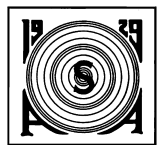
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Foreword

[This Foreword is for information only and is not a part of the American National Standard ANSI/ASA S12.60-2010/Part 1 American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools.]

This standard comprises a part of a group of definitions, standards, and specifications for use in noise. It was developed and approved by Accredited Standards Committee S12, Noise, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S12 is as follows:

Standards, specifications, and terminology in the field of acoustical noise pertaining to methods of measurement, evaluation, and control, including biological safety, tolerance, and comfort, and physical acoustics as related to environmental and occupational noise.

At the time of publication of this document, the ANSI/ASA S12.60 series of standards includes the following American National Standards:

- ANSI/ASA S12.60-2010/Part 1 *American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools*
- ANSI/ASA S12.60-2009/Part 2 *American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 2: Relocatable Classroom Factors.*

Work is also underway on a new part, ANSI/ASA S12.60/Part 3, *American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 3: Information Technology Equipment in Classrooms*. An informative technical report is also planned as Part 4 of this series which is envisioned to cover, at a minimum, the topics previously included in ANSI/ASA S12.60-2002 (R 2009), Annexes A, B, D, F and G.

This standard is not comparable to any existing ISO Standard.

At the time this standard was submitted to Accredited Standards Committee S12, Noise, for approval, the membership was as follows:

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Suggestions for improvements to this standard will be welcomed. They should be sent to Accredited Standards Committee S12, Noise, in care of the Standards Secretariat of the Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177. Telephone: 631-390-0215; FAX: 631-390-0217; E-mail: asastds@aip.org.

Introduction

It is essential that both architectural and mechanical design provide good acoustical characteristics for classrooms and other learning spaces in which speech communication is an important part of the learning process. Excessive background noise or reverberation in such spaces interferes with speech communication and thus presents an acoustical impediment to learning. With a classroom having good acoustical characteristics, learning is easier, deeper, more sustained, and less fatiguing. Teaching should be more effective and less stressful with well designed acoustical characteristics in a classroom. There can be more verbal interaction and less repetition between teacher and students when spoken words are clearly heard and understood. All those in a classroom, including teachers and adult learners, will benefit from a classroom having the acoustical characteristics recommended in this standard. Special beneficiaries are young children and persons with hearing, language, speech, attention deficit, or learning disabilities. Conformance to the requirements and guidelines of this standard will improve the quality of education by eliminating acoustical impediments for all students and teachers, including those with communication disabilities. This standard seeks to provide flexibility for the design of learning spaces without compromising the goal of obtaining adequate speech intelligibility for all students and teachers in classrooms and learning spaces within the scope of this standard.

